

REMARKS/ARGUMENTS

Claims 1-39 are pending in the present application. The Examiner has rejected claims 1-39. Applicant has amended claims 2, 3, 5, 11, 15-17, 19, 23-25, 29, 33-35, and 37. Applicant respectfully requests reconsideration of pending claims 1-39.

The Examiner has rejected claim 2 under 35 U.S.C. § 112, first paragraph, as containing subject matter which the Examiner alleges was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The Examiner states that "essential messages" have been referred to without being formally defined in the specification and that the definition of that term was not understood.

Applicant respectfully disagrees. Applicant refers the Examiner to Fig. 4 and page 10, line 24, through page 11, line 28, of the specification. Applicant notes that link layer information is given as an example of an essential call signaling message type (page 11, line 10). Applicant submits that one of ordinary skill in the art, with the benefit of the disclosure provided by the specification, would readily appreciate the nature of an essential call signaling message type, especially in view of the stated example of link layer information and the understanding that such an example would connote. Moreover, Applicant submits that the definiteness of "dispensable messages" and "indispensable messages," as evidenced by the Examiner's retraction of the rejection of claim 2 for the alleged indefiniteness of "indispensable messages," further underscores the definiteness of the meaning of "essential messages" in the context of "dispensable messages" and "indispensable messages." Therefore, Applicant submits that the Examiner's rejection of claim 2 under 35 U.S.C. § 112, second paragraph, is obviated. Furthermore, Applicant has amended claims 2, 3, 5, 11, 15-17, 19, 23-25, 29, 33-35, and 37. Applicant notes that the amendments do not introduce any additional limitations to such claims, but rather broaden the scope of such claims. Thus, Applicant submits that claim 2 is in condition for allowance.

The Examiner has rejected claim 2 under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner states that "essential" is indefinite. Applicant refers to the arguments presented above regarding the definiteness of "essential messages" in the context of the definiteness of "dispensable messages" and "indispensable messages." Therefore, Applicant submits that "essential messages" is not indefinite. Furthermore, Applicant again notes the amendments to the claims mentioned above. Thus, Applicant submits that claim 2 is in condition for allowance.

The Examiner has rejected claims 1, 2, 14, 22, 23, 25, 32, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gehi (U.S. Patent No. 6,134,216) in view of IBM Technical Disclosure (Vol. 34, No. 9, February 1992). The Examiner states that Gehi fails to explicitly teach enqueueing the messages based on its type. The Examiner states that IBM teaches having messages enqueued based on their type ("enqueued message types" and "message of the corresponding type to be enqueued," page 170, paragraph 2). The Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of enqueueing call signaling messages based on its type to the existing system of Gehi in order to increase selectivity of the contents in the processing queue.

Applicant reiterates Applicant's previous arguments regarding such rejection. Moreover, Applicant notes that the IBM Technical Disclosure Bulletin reference pertains to non-analogous art, namely to a "BSD socket-based message queue IPC system implementation." That reference "describes a method to allow structured message passing between processes using BSD Sockets that emulates the functionality of System V Message Queue IPC" (page 168, first paragraph). Because of the non-analogous nature of the cited reference, the "enqueued message types" and "message of the corresponding type to be enqueued" (page 170, paragraph 2) cited by the Examiner do not disclose enqueueing the plurality of call signaling messages into the call processing queue based on types of call signaling messages. For example, the cited reference states that "type" refers to the "message type, a positive integer" and is used to "distinguish between other messages." Also, as noted previously, Gehi et al. state, in col. 4, lines 26 and 27, that "...S(n) is compared against two thresholds X(min,i) and X(max,i)...." Furthermore, Gehi et al. state, in col. 4, lines 3-15, that "X(n) represents the measured utilization over interval (n). The measure that is used for short-term control during interval (n) is represented as S(n). This measure is a filtered version of X(n) such as from the following expression: $S(n) = a(1)X(n) + a(2)X(n-1) + \dots + a(W(S))X(n+1-W(S))$ where, a(j) is the filtering (smoothing) factor applied for the measured utilization over the j'th interval from the most recent measurement, and a(1) is the smoothing factor for the most recent measurement interval. S(n) when measured at a given time interval (n) reflects the smoothed value of the utilization over the past W(S) consecutive intervals." Thus, Applicant submits that S(n) of Gehi et al. does not constitute a queue occupancy level. Therefore, Gehi et al. does not disclose the step of comparing. Furthermore, while the Examiner cites Gehi et al.'s reference to "...level is changed to be at level (I-1)...," in col. 4, line 36, Gehi et al. states in col. 4, line 28, that "...i represents the present short term overload 'level'...." Thus, Applicant submits that Gehi et al. fails to disclose enqueueing as recited. Therefore, Applicant submits that, even

if an attempt were made to combine the teachings of the cited portion of Gehi et al. with the teachings of the cited portion of the IBM Technical Disclosure Bulletin, the attempt still would not yield the claimed invention, as Applicant submits that neither reference discloses or suggests the steps cited above. Applicant submits that there is no suggestion in the prior art to motivate any attempt to combine the teachings of the cited references. Thus, Applicant submits that claims 1, 2, 14, 22, 23, 25, 32, and 33 are in condition for allowance.

Referring to claims 2, 15, 23, and 33, the Examiner states that Gehi in view of IBM fails to explicitly teach using dispensable, indispensable, and essential messages as type of call signaling messages. The Examiner, however, states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a dispensable type of message to the existing system of Gehi and IBM for the reasons of maximizing the communication efficiency by minimizing wasteful communication resources. Applicant reiterates Applicant's previous arguments. For example, Applicant cannot find any reference in the specification or drawings to support the Examiner's apparent attempt to describe a dispensable type of call signaling messages in the context of what the Examiner terms "wasteful communications resources." Thus, Applicant submits that no support exists for the Examiner's attempts to show motivation to combine the teachings of the cited references. Also, Applicant notes that incompatibility of the cited references, given the asserted non-analogous nature of the IBM Technical Disclosure Bulletin reference, prevents combination of the teachings of the cited references to allegedly yield the present invention, regardless of the alleged motivation. Therefore, Applicant submits that claims 2, 15, 23 and 33 are in condition for allowance.

Referring to claims 3, 7, 16, 24, 34, and 36, the Examiner states that Gehi in view of IBM fails to explicitly teach the following:

- a) when message is dispensable, delete the previous dispensable message;
- b) enqueueing new message when previous one is deleted;
- c) enqueueing message into queue when message is indispensable or essential.

The Examiner, however, states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a) and b) to the existing system of Gehi and IBM for the reason of deleting the old values and adding the new values to the queue for updating reasons. In addition, the Examiner states that it would have been obvious to one of ordinary skill in the art at the time the

invention was made to include c) to the existing system of Gehi and IBM for the reason of replacing the dispensable messages with both indispensable or essential ones.

Applicant respectfully disagrees. Applicant submits that the Examiner's argument for "deleting the old values and adding the new values to the queue for updating reasons" is inconsistent with the Examiner's previously asserted argument. For example, the Examiner referred to "a dispensable type of message" in the context of "wasteful communication resources," but now argues that it would be obvious to update messages that relate to "wasteful communication resources." Thus, if the Examiner adheres to the above-cited argument, the teachings of the prior art would teach away from the present invention. Even if the Examiner were to abandon the above cited argument, Applicant submits that the Examiner has not shown how the prior art allegedly teaches any benefit from updating old values with new values, absent any teaching that such new values bear any relationship with such old values as to yield any benefit from such alleged updating. Therefore, Applicant submits that the cited references fail to teach or suggest the subject matter of claims 3, 7, 16, 24, 34, or 36. Thus, Applicant submits that claims 3, 7, 16, 24, 34, and 36 are in condition for allowance.

Referring to claims 4, 6, 8, and 27, the Examiner states that Gehi in view of IBM fails to explicitly teach dropping the call signaling message if the previous dispensable one does not exist. However, the Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include this feature to the existing system of Gehi and IBM for the reason of increasing efficiency by removing wasteful resource material.

As Applicant has stated above, Applicant cannot find any reference in the specification or drawings to support the Examiner's apparent attempt to describe a dispensable type of call signaling messages in the context of what the Examiner terms "wasteful resource material." Thus, Applicant submits that no support exists for the Examiner's attempts to show motivation to combine the teachings of the cited references. Consequently, Applicant submits that there is no suggestion in the prior art to motivate any attempt to combine the cited references. Therefore, Applicant submits that claims 4, 6, 8, and 27 are in condition for allowance.

Referring to claims 5, 17, 25, and 35, the Examiner states that Gehi in view of IBM discloses a method consisting of the following:

- Comparing queue occupancy level with second threshold (compared against threshold X[min,I], col. 4, lines 24-49)

- When occupancy level compares unfavorably with threshold, dequeue call signaling messages into processing queue based on type of call signaling messages (level is changed to be at level (I-1) over the upcoming interval, col. 4, lines 24-49).

The Examiner states that Gehi in view of IBM fails to teach the following:

- a) when message is dispensable, delete the previous dispensable message;
- b) enqueueing new message when previous one is deleted;
- c) enqueueing message into queue when message is essential.

However, the Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a) and b) to the existing system of Gehi and IBM for reason of deleting the old values and adding the new essential values to the queue for updating the queue with relevant messages.

Applicant respectfully disagrees. Applicant reiterates Applicant's previous arguments. For example, as noted above, Applicant submits that S(n) of Gehi et al. does not constitute a queue occupancy level. Therefore, Gehi et al. does not disclose the step of comparing. Furthermore, while the Examiner cites Gehi et al.'s reference to "...level is changed to be at level (I-1)...," in col. 4, line 36, Gehi et al. states in col. 4, line 28, that "...i represents the present short term overload 'level'...." Thus, Applicant submits that Gehi et al. fails to disclose enqueueing as recited. Therefore, Applicant submits that, even if an attempt were made to combine the teachings of the cited portion of Gehi et al. with the teachings of the cited portion of the IBM Technical Disclosure Bulletin, the attempt still would not yield the claimed invention, as Applicant submits that neither reference discloses or suggests the steps cited above. Applicant submits that there is no suggestion in the prior art to motivate any attempt to combine the teachings of the cited references. Applicant further notes that the asserted non-analogous nature of the IBM Technical Disclosure Bulletin reference prevents any such attempt to combine the teachings of the cited references. Therefore, Applicant submits that claims 5, 17, 25, and 35 are in condition for allowance.

Referring to claim 10, the Examiner states that Gehi in view of IBM fails to explicitly teach using at least one of FIFO and LIFO. However, the Examiner states that it would have been obvious to

one of ordinary skill in the art at the time the invention was made to include this feature to the existing system of Gehi and IBM because it is well-known that a queue can either operate as FIFO or LIFO.

Applicant respectfully disagrees. Applicant submits that the Examiner does not provide any evidence to substantiate the assertion "that a queue can either operate as FIFO or LIFO." Moreover, the Examiner does not provide any evidence to support an attempt to combine the teachings of Gehi et al. and IBM and then modify the supposed result so as to comprise at least one of FIFO and LIFO. Thus, Applicant submits that claim 10 is in condition for allowance.

Referring to claims 12, 20, 30, and 38, the Examiner states that Gehi in view of IBM fails to explicitly teach updating the plurality of dequeuing lists when the enqueueing changes occur. However, the Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include this updating feature to the existing system of Gehi and IBM for the reason of improving accuracy and organization.

Applicant respectfully disagrees. Not only do neither of Gehi et al. nor IBM teach updating the plurality of dequeuing lists when enqueueing changes occur, but, as described in detail above, Gehi et al. and IBM further fail to teach "when the queue occupancy level compares unfavorably with the first queue occupancy threshold or when the queue occupancy level compares unfavorably with a second queue occupancy threshold." Thus, there is no suggestion in the prior art to combine the cited references, nor, if an attempt were made to combine them, would the claimed invention result. Moreover, there is no suggestion in the prior art to modify the cited references, when, in fact, the cited references lack all of the elements introduced by the cited dependent claims. Therefore, Applicant submits that claims 12, 20, 30, and 38 are in condition for allowance.

Referring to claim 18 and 26, the Examiner states that Gehi in view of IBM fails to explicitly teach dropping the call signaling message if the previous dispensable one does not exist. The Examiner states, however, that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include this feature to the existing system of Gehi and IBM for the reason of increasing efficiency by removing wasteful resource material. The Examiner states, in addition, that Gehi in view of IBM fails to explicitly teach enqueueing the message when the previously indispensable one is deleted. The Examiner states, however, that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of enqueueing the new message for the reason of adding the new values to the queue for updating reasons.

As Applicant has stated above, Applicant cannot find any reference in the specification or drawings to support the Examiner's apparent attempt to describe a dispensable type of call signaling messages in the context of what the Examiner terms "wasteful resource material." Thus, Applicant submits that no support exists for the Examiner's attempts to show motivation to combine the teachings of the cited references. Also, Applicant submits that the Examiner has not shown how the prior art allegedly teaches any benefit from updating old values with new values, absent any teaching that such new values bear any relationship with such old values as to yield any benefit from such alleged updating. Consequently, Applicant submits that there is no suggestion in the prior art to motivate any attempt to combine the teachings of the cited references. Therefore, Applicant submits that claims 18 and 26 are in condition for allowance.

The Examiner has rejected claims 9, 21, 28, and 31 under 35 U.S.C. § 103(a) as being unpatentable over Gehi (U.S. Patent No. 6,134,216) in view of IBM in further view of Holmes (U.S. Patent No. 5,999,969). Referring to claims 9, 13, 21, 28, 31, and 39, the Examiner states that Gehi in view of IBM fails to explicitly teach the use of dequeuing messages from a call processing queue when in sustained overloading condition. The Examiner states that Holmes teaches using a message dequeue operation (col. 25, lines 21-25) with a message queue as a call processing queue (message queues, col. 7, lines 35-37). The Examiner states, however, that Holmes fails to explicitly teach doing this in a sustained overloading condition. The Examiner further states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include this feature to the existing system of Gehi and IBM for the reason of preventing a burst of overhead data and to stay under the switch's capacity.

Applicant respectfully disagrees. Applicant submits that the Examiner's asserted motivation of preventing a burst of overhead data teaches away from claims directed toward a sustained overloading condition. Therefore, Applicant submits that there is no suggestion in the prior art to attempt to combine or modify the cited reference in an attempt to yield the claimed invention as set forth in claims 9, 21, 28, and 31. Thus, Applicant submits that claim 9, 21, 28, and 31 are in condition for allowance.

The Examiner has rejected claims 11, 19, 29, and 37 under 35 U.S.C. § 103(a) as being unpatentable over Gehi in view of IBM in further view of Baldwin (U.S. Patent 6,310,952). Referring to claims 11, 19, 29, and 37, the Examiner states that Gehi and IBM fail to explicitly teach maintaining a plurality of dequeuing lists that track the following:

- locations in the call processing queue;

The Examiner further states that Baldwin teaches keeping track of that caller's location in a call queue (col. 4, lines 62-67). The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include this feature of tracking the location to the existing system of Gehi and IBM for the reasons of having a "pointer" in the queue so comparisons can be made towards the threshold to determine when there is sustained overloading.

The Examiner states that the system of Gehi, IBM, and Baldwin fail to teach tracking the following:

- an ordered list of types of calling signaling messages;
- an ordered list of dispensable messages;
- an ordered list of indispensable messages;
- an ordered list of essential messages.

The Examiner states, however, that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include having types of calling signaling messages to the system of Gehi, IBM, and Baldwin for the reason of increasing selectivity of the contents in the processing queue. Furthermore, the Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a dispensable type of message to the existing system of Gehi and IBM for the reason of maximizing the communication efficiency by minimizing wasteful communication resources. The Examiner states that the Office interprets "essential messages" to mean those that have any sort of relevance. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include relevant types of messages to the existing system of Gehi and IBM because the Examiner considers them to be important. In addition, the Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include indispensable messages for the reason of having more message types for selectivity.

Applicant respectfully disagrees. As for "essential messages," Applicant notes Applicant's amendments to the claims. Moreover, Applicant cannot find any reference in the specification or drawings to support the Examiner's apparent attempt to describe a dispensable type of call signaling

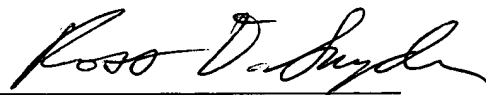
messages in the context of what the Examiner terms "wasteful communication resources." Thus, Applicant submits that no support exists for the Examiner's attempts to show motivation to combine the teachings of the cited references. Consequently, Applicant submits that there is no suggestion in the prior art to motivate any attempt to combine the cited references. Therefore, Applicant submits that claims 11, 19, 29, and 37 are in condition for allowance.

In conclusion, Applicant has overcome all of the Office's rejections, and early notice of allowance to this effect is earnestly solicited. If, for any reason, the Office is unable to allow the Application on the next Office Action, and believes a telephone interview would be helpful, the Examiner is respectfully requested to contact the undersigned attorney.

Respectfully submitted,

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Date



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